

Safford
Regional Airport
Master Plan
Update 2000
Safford, Arizona



Inventory 

2.1 INTRODUCTION

This chapter presents information collected on the Safford Regional Airport and surrounding community to establish baseline conditions for the Airport Master Plan Update. Data was collected through various sources including an on-site visit, excerpts from the 1990 Airport Master Plan, and a review of other pertinent documents and files. Local, state, and national sources were also used to provide updated information representing airport conditions through the year 1997, which is the base year for the plan.

Airport and community background information, existing airside and landside facilities, and key socioeconomic characteristics are presented.

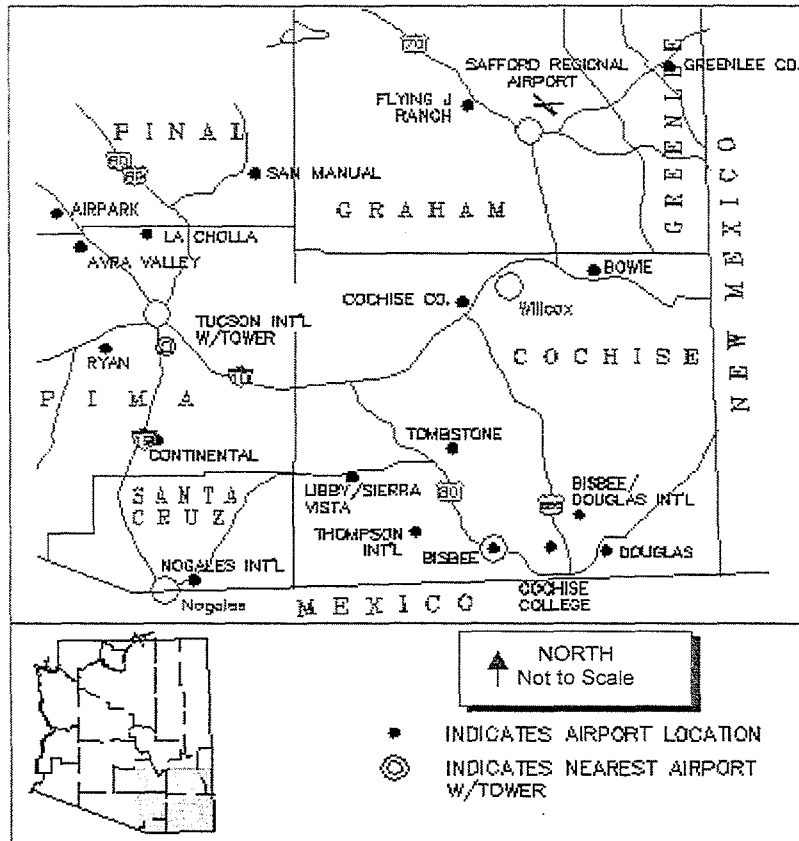
2.2 BACKGROUND

The City of Safford is in southeastern Arizona (**Exhibit 2-1**) on the south bank of the Gila River near the foothills of the Pinaleno Mountains. Mt. Graham is the highest peak in the mountain range at 10,720 feet elevation. Safford is approximately 10 miles north of the Coronado National Forest.

Safford was originally established in 1874 as an agricultural community. The existing airport, constructed as a training site during World War II by the United States Army Air Forces, was activated on November 11, 1941. According to the airport's files, the City of Safford officially acquired the airport on March 8, 1946. Further, a patent for the property was recorded in April 1956, pursuant to the authority contained in Section 16 of the Federal Airport Act, which restricts the use of airport property to aviation use only.

Safford serves as the county seat to Graham County. Safford Regional Airport is located approximately four miles northeast of the City. Tucson is the closest major metropolitan area, located 130 miles southwest of Safford.

EXHIBIT 2-1 LOCATION MAP



The Safford Regional Airport consists of 630 acres at an elevation of 3,176 feet. Primary facilities include two runways with parallel taxiways, a terminal building, one centralized aircraft apron with tiedowns, aircraft conventional hangars and t-hangars, vehicle parking, and an access road. The airport reference code (ARC) for Safford Regional Airport is currently B-II. This means the airport primarily serves aircraft with approach speeds of less than 121 knots and wingspans of up to but not including 79 feet.

The existing airport is owned by the City of Safford. The administrative responsibility for the airport lies with the Public Works Department. However, the Airport Authority oversees the operation and maintenance of the airport through a 1988 agreement with the City of Safford. Further, the fixed base operator (FBO), Safford Aviation, has an

agreement with the Safford Airport Authority to provide hands-on management of the airport on a day-to-day basis.

2.2.1 Airport Development History

Major improvements made to the airport in the last five years include the rehabilitation of the aircraft apron, the reconstruction of Runway 12-30, the installation of perimeter fencing, the construction of a public-use helipad, and the installation of an Automated Surface Observation System (ASOS). A more detailed history of airport development is provided in Appendix A. The last airport master plan was completed in 1989 and published in January 1990.

2.2.2 Regional Transportation

Highways

Safford is located at the junction of U.S. Highway 70 and 191. Truck transportation is provided by the interstate trucking companies and delivery services.

Railroads

Arizona Eastern Railway Company provides freight delivery service to Solomon, southeast of Safford. AMTRAK, passenger rail service, is available in Lordsburg, New Mexico, 77 miles east of Safford, or Benson, 80 miles south.

Air

The closest scheduled air passenger service is in Tucson, Arizona (2½ hours drive), but non-scheduled passenger and cargo air taxi service is available out of Safford Regional. UPS aircraft also serve the cargo needs of Safford. Greenlee County Airport, located 23 nautical miles (nm) to the northeast, and Flying J Ranch Airport, located 12 nm to the west are the closest public use airports to Safford Regional Airport. According to AirNav, Greenlee County Airport is at an elevation of 3,811 feet MSL with one paved 4,970-foot runway (Runway 7-25) and three based aircraft. The Flying J Ranch Airport is at an elevation of 3,100 feet MSL with one 2,580-foot dirt runway (Runway 01-19) and four based aircraft. Fuel service is unavailable at both airports. Cochise County Airport (39 nm to the south) is the closest airport with fuel service available.

2.3 AIRSIDE FACILITIES

Exhibit 2-2 illustrates the existing airside and landside facilities at Safford Regional. A description of each follows.

2.3.1 Runways

Safford Regional Airport has two runways. Runway 12-30, the primary runway, is 6,000 feet by 100 feet with a load bearing capacity of 33,000 lbs. single wheel gear (SWG). Runway 8-26 is the crosswind runway with dimensions of 4,800 by 75 feet with a weight bearing capacity of 23,000 lbs. SWG. Both runway pavements are asphalt and in good condition. In 1998, Runway 8-26 received a microsurface pavement surface treatment as part of an airport-wide pavement maintenance program. Subsequently, Runway 12-30 received a coal tar treatment as part of the same program.

2.3.2 Taxiways

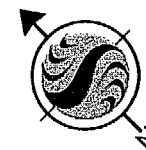
Both Runways 12-30 and 8-26 have full-length parallel taxiways. The following summarizes the identifiers and separations for these taxiways.

<u>Runway</u>	<u>Taxiway Identifier</u>	<u>Approx. Separation from Runway Centerline</u>
12-30	"A" (NW of intersection)	233 feet
	"B" (SE of intersection)	238 feet
8-26	"C" (East of intersection)	239 feet
	"D" (West of intersection)	479 feet

Runway 12-30's parallel taxiway has six connecting taxiways and Runway 8-26's taxiway has five. All parallel and connecting taxiways are asphalt and approximately 35 feet wide with the exception of two that are 48 and 50 feet wide. Parallel Taxiway C received a microsurface treatment as part of a pavement preservation project in 1998.

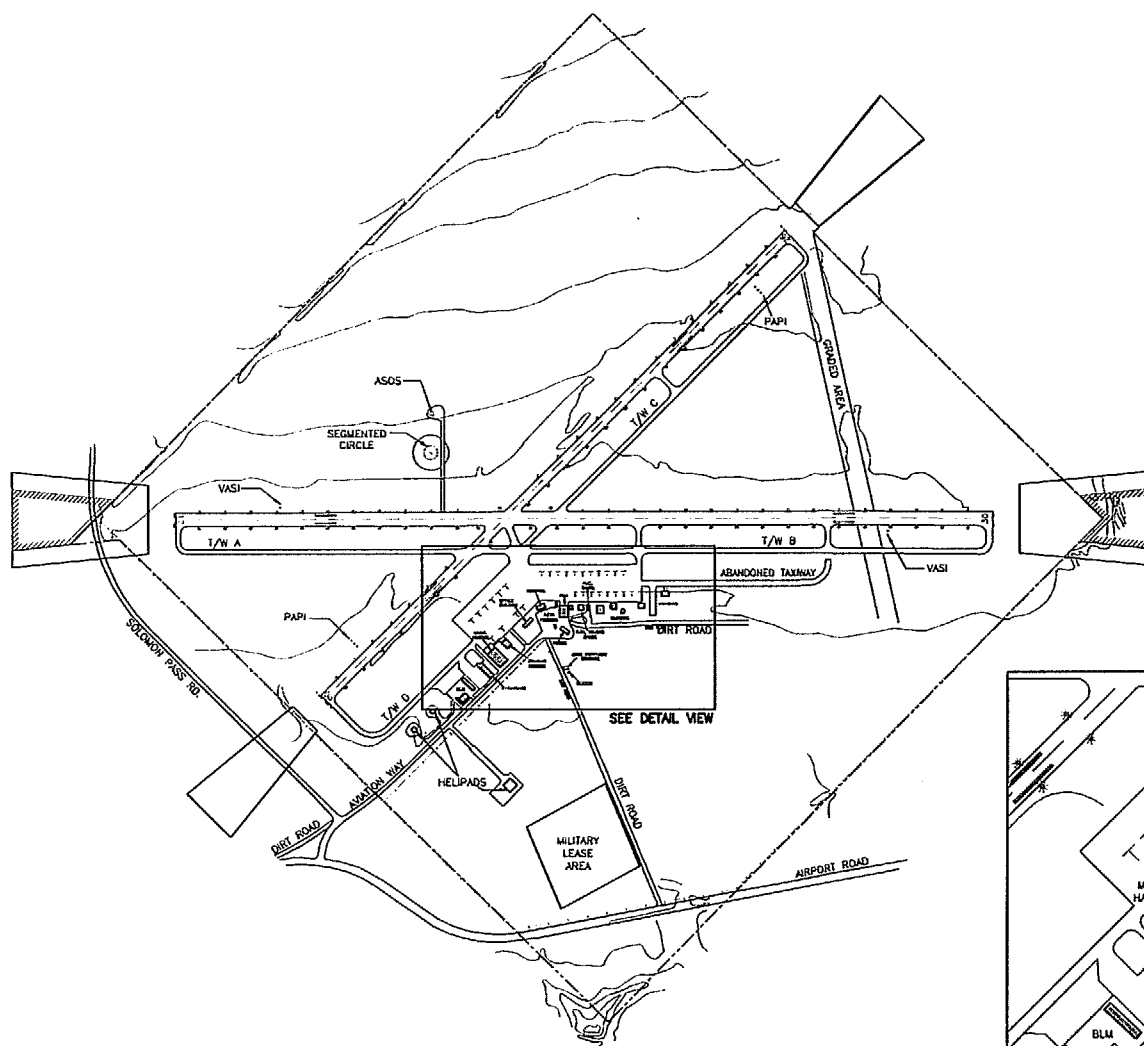
2.3.3 Aprons

As shown in Exhibit 2-2, Safford Regional Airport has a large centralized aircraft apron on the south side of the intersecting runways. The apron area is approximately 48,800 square yards for tiedowns, taxilanes, and circulation. There are a total of 34 physical

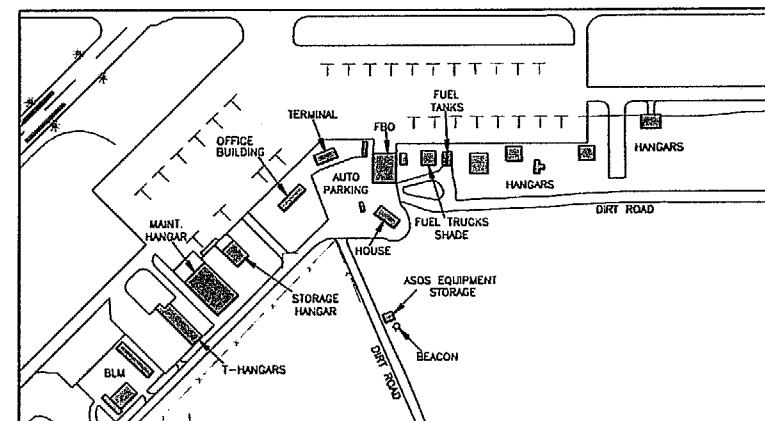


Not to Scale

LEGEND	
DESCRIPTION	KEY
EXISTING EASEMENT	
PROPERTY LINE	
FENCE	



TERMINAL AREA DETAIL VIEW



SAFFORD REGIONAL AIRPORT
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EXHIBIT 2-2
Existing Facilities



Stantec

tiedowns for based and transient aircraft -- 15 large on the west side of the apron and 19 small on the east side. However, only 10 of the 15 large tiedowns have chains and are properly marked.

2.3.4 Helicopter Operations Area

There are three helipads at the Safford Regional Airport: one public use and two private BLM pads. The public use helipad is located southwest of the terminal area on the south side of Aviation Way – the airport access road. Although the helipad is new, it quite often goes unused since there are no parking facilities immediately adjacent to the pad. Thus, helicopters continue to use the apron as an alternative. The two private BLM helipads are west of BLM's existing buildings and on the north side of Aviation Way. During peak firefighting operations, the BLM also uses the apron.

2.3.5 Navigation Aids, Visual Aids, and Markings

Both Runways 12-30 and 8-26 have medium intensity runway lighting (MIRL) systems (lights running the length of a runway). Both MIRL systems are variable intensity (radio-controlled). Runway 12-30 has visual approach slope indicators (VASI's) and Runway 8-26 has precision approach path indicators (PAPI's) – both provide vertical guidance for VFR approaches and the visual portion of an instrument approach and landing. Both runways have basic markings (for visual approaches), but Runway 12-30 has a global positioning system (GPS) instrument approach for both runway ends. GPS is a satellite-based navigational system operated by the U. S. Department of Defense and made available for civilian use for en route navigation, aircraft instrument approaches and other purposes. Runway 12-30's GPS approaches were published October 8, 1998. Appendix B includes an illustration of these approaches. Runway 12-30 is currently being re-marked with non-precision markings. The San Simon VORTAC station (approximately 40 nm southeast) is also used for navigation to the airport.

A segmented circle providing traffic pattern information along with a wind tee is located on the north side of the airport near the ASOS.

All taxiways are marked with centerlines and equipped with medium intensity taxiway lighting (MITL) systems. The MITL systems, like the MIRL systems on both runways, are pilot-/radio-controlled.

2.4 LANDSIDE FACILITIES

This section describes the existing landside facilities for Safford Regional Airport as previously illustrated in Exhibit 2-2.

2.4.1 Terminal Building

Safford Regional Airport has a terminal building with approximately 1,100 square feet. The terminal building is occupied by the FBO (Safford Aviation). The building includes administrative space along with a pilot lounge/waiting room, restrooms, and an equipment/utilities room. The terminal building, estimated at over 30 years old, is in good condition.

2.4.2 Aircraft Storage and Other Airport Structures

Aircraft Storage

Safford Regional Airport has a combination of conventional, shade, and T-hangars. **Table 2-1** summarizes these hangars, their ownership, current tenant, total area, and existing condition. The condition of each hangar has been rated by the Airport Authority as poor, fair, good, or excellent. A rating of poor describes a facility needing immediate attention. Fair and good ratings represent buildings which may not need significant maintenance or replacement for several years. An excellent rating represents buildings which are fairly new and/or will not require attention during the planning period.

Table 2-1
Summary of Airport Hangars

Hangar Type	Owner (Tenant)	Area*	Condition
Conventional	City (FBO)	4,800 s.f. (H1)	Poor
Conventional	City (FBO)	2,000 s.f. (H2)	Good
Conventional	City (Clay Richardson)	2,668 s.f. (H3)	Fair
Conventional	Caribou, Inc	NA (P1)	Excellent
T-hangar (1 unit)	Joe Hyde	NA (P2)	Fair
Conventional	Howard Jenkins	NA (P3)	Excellent
Conventional	City (Ron Bryce)	NA (C2)	Excellent
Conventional	City (SE Air Tankers)	NA (C8)	Excellent
T-hangars (4 units)	(John Martin) (Terry Nichols) (Arylin Feight) (Allen Pump)	5,158 s.f. total (T1-T4)	Good

Source: City of Safford. *City-assigned references in parentheses.

Other Airport Structures

Other airport structures include three BLM-owned and occupied buildings; an emergency generator facility; an ASOS facility; fuel tanks; a newly constructed (1999) fuel truck shade; and two homes used by the FBO – one as a residence and the other as an office building (for storage space).

The BLM structures include a new 3,000-square foot administrative building (built in 1999), firefighting facilities, and a storage shed.

2.4.3 Surface Access and Parking

There is one paved access road into the airport. The access road is off of Airport Road which runs east-west just south of the airport. The access road leads up to the paved terminal parking area. The terminal parking area has 30 general public parking spaces, 4 employee spaces, and 2 handicapped spaces. Other unmarked parking is available adjacent to the other airport buildings for individual tenants/users.

2.4.4 Support Facilities

Support facilities, presented here, include FBO services, fueling, maintenance, ARFF, security, and utilities.

FBO

The FBO, Safford Aviation, provides numerous services to include:

- Aircraft rentals
- Charter flights for passengers and freight
- Flight instruction
- Aircraft servicing
- Pilot services
- Major and minor airframe and powerplant maintenance
- Car rental
- Aircraft assistance services (parking assistance to incoming aircraft)
- Administration and public service /fuel sale

The FBO staffs the airport during operating hours: Monday through Saturday from 7:30 A.M. to 5:30 P.M., and Sunday from 7:30 A.M. to 3:30 P.M.

Fueling

Both Jet A and 100 LL fuel types are available at Safford Regional Airport. Two newly installed (1998) fuel tanks provide storage. Both tanks are in excellent condition and store 10,000 gallons of 100LL and 12,000 gallons of Jet A. These aboveground tanks are owned by the City of Safford and operated by the FBO for public fuel sales. The aboveground tanks replace the underground storage tanks recently removed. As of 1999, the self-service fuel tanks have also been removed so aircraft fueling is accomplished solely with fuel trucks.

Maintenance

Airport maintenance is provided by the City of Safford through the Airport Authority and FBO agreements. Maintenance equipment comes from the City fleet as well as some stored at the airport. Equipment used at the airport includes a tractor (mower and bucket), ATV sprayer for weeds, sweeper, pick-up truck, and an aircraft tug.

Aircraft Rescue and Firefighting Facilities (ARFF) and Security

Firefighting support is provided by the City's 28 volunteers. All firefighting personnel are trained in aircraft rescue and firefighting (ARFF) procedures. The City's firefighting response time is approximately 8-10 minutes as they are only 6½ miles from the airport. The City provides the volunteers with required equipment and support.

Airport security is provided by the City's 15 police officers on an as-needed basis as well as through surveillance conducted approximately twice per week. Like the fire department, emergency response time is approximately 8-10 minutes. Safford's police station is located near the fire station – approximately 6½ miles from the airport.

Security fencing at the airport along the north and east side consists of four-foot tall, three-strand fencing topped with double-barbed wire. Chainlink fencing lies generally along the west and south side of the airport. Security lighting in the terminal area is provided adjacent to the terminal building and parking lot.

Safford does not have an air traffic control tower (ATCT) since Safford's current activity is well below the 200,000 operations threshold for an FAA-operated ATCT.

Utilities

Utilities at the airport include electric, propane, water, telephone, and sewage. Some hangar facilities do not have utilities. However, the terminal building does have access to all utilities.

The City provides electricity and water; a private vendor (Matlock) provides the propane. The appropriate capacity of the existing power line serving the airport is 2100 KVA. The existing load is approximately 150 KVA. The existing power line to the airport is fed by a Graham County Electrical Corporation transmission line and transformers with limited capacity. The water comes from a five-inch diameter, 6,000-foot long line connected to a City of Safford pump station. It is estimated that no more than 200 gallons per minute through the existing line can be provided. Telephone service is provided by U.S. West. Sewage needs are supported by on-site septic tanks.

The airport's diesel-powered emergency generator provides sufficient power to operate the airfield lighting, beacon, ASOS, terminal building, and radio communications.

2.5 AIRSPACE AND AIR TRAFFIC ACTIVITY

This element included an inventory of airspace, procedures, and operations at the Safford Regional Airport. **Exhibit 2-3** illustrates the current airspace for the Safford area. This illustration is an excerpt from the Phoenix Sectional Aeronautical Chart. Safford as well as the nearby Greenlee County and Flying J Ranch Airports are identified.

As shown on Exhibit 2-3, there are Military Operating Areas (MOAs) surrounding Safford area. These MOAs primarily include the Jackal MOA encompassing Safford which is operational Monday through Friday, 0700 to 1800, and the Morenci MOA located just east of the Jackal MOA and operating Monday through Friday, 0600 to 2100. The Jackal MOA's eastern border is just east of the Safford Regional Airport. However, its northern boundary extends over 60 nm past Whiteriver. The western and southern boundaries are approximately 22 and 50 nm, respectively from Safford. The Morenci MOA extends into New Mexico. These areas are for military use and under FAR 73, Subpart B - Restricted Areas, military aircraft operations are restricted between the

designated altitudes and during the time of designation. Other aircraft may enter the area above the restricted altitudes or with advance permission from the controlling agency and continual contact with Albuquerque Air Route Traffic Control Center (ARTCC) while operating in the MOA.

The Gila Box Riparian National Conservation Area lies approximately 15 miles northeast of the airport. Both the Fishhooks Wilderness Area to the northwest and the North Santa Teresa Wilderness Area to the west are at least 30 miles from the airport.

Aircraft flight pattern altitude is 4,000 feet mean sea level (MSL) for light aircraft and 4,200 for larger aircraft. Safford Regional Airport uses a standard left-turn traffic pattern. There are no noise abatement procedures in place.

The airport has a rotating beacon which operates from sunset to sunrise. As previously mentioned, Safford Regional was a visual airport up until October 8, 1998, when GPS instrument approaches were published for Runways 12 and 30. Prescott Flight Service Station and Albuquerque Center serve the flight service and ARTCC needs of the airport.

Obstructions to the airport airspace include Solomon Pass Road and the airport's perimeter fencing. Details of these obstructions are identified in Chapter 8, Airport Plans. All other runways are identified as clear of obstructions.

According to the airport, estimated annual operations at Safford Regional Airport for 1997 totaled 14,100 with 28 aircraft based at the airport (estimates for 1998 are similar). Appendix C includes information available, to date, on based aircraft including type and tail number.

2.6 ENVIRONMENTAL CONDITIONS

This section summarizes the existing airport environs to include climate, soils, vegetation, drainage, and land use.

2.6.1 Climate

High temperatures during the summer months are typically in the low-to-mid 90° F range, while lows in December and January average around 30° F. Average precipitation for Safford is about nine inches per year.

The current wind data (January 1992 to December 1996) for Safford indicates that each runway has more than 99 percent wind coverage and that both runways combined have nearly 100 percent wind coverage (specifically 99.9 % coverage). With the airport's new ASOS (operational in mid-1997), this wind data can be updated in the future through its National Weather Service link. However, the ASOS (located on the north side of the runway intersection) has not been in-place for an adequate time period to accurately update the last five-year wind data report. The existing windrose is illustrated on the airport layout plan (ALP) in Chapter 8.

2.6.2 Soils

According to the City of Safford records, soils in Safford vary depending upon location with respect to the Gila River and surrounding mountain areas. Virtually all developed portions of the City are located in Grabe, Anthony, and Gila soils, providing an adequate base for low buildings and road development. Scattered erosional remnants of Pima soils (clay and clay loams) are also found in the valley, although they are less desirable for building purposes. Pinaleno soils (gravely loam surface with a weakly cemented layer of lime at depths below 2-3 feet), along with rough broken land cover much of the south end of the City of Safford.

2.6.3 Vegetation

Natural vegetation in the Safford Valley Region is typical of many desert valleys in the American Southwest. Creosote bush, saltbush, sagebrush, yucca, burrsage mesquite, and Indian wheat are the dominant species in the area. A riparian vegetation regime occurs in river valley areas adjacent to the Gila River. These areas are characterized by scattered stands of cottonwood and black willow amidst dense thickets of water motie and arrowweed.

2.6.4 Drainage

According to the drainage analysis completed in 1998, Safford Regional Airport is situated between three major washes. Tidwell Wash is located east of the airport, Lone Star Wash is located northwest of the airport, and Dry Lake Wash is located west of the airport. Tidwell and Lone Star Washes convey the majority of the Gila Mountain runoff around the airport toward the Gila River. Dry Lake Wash conveys off-site runoff west of the airport toward the Gila River. An off-site area between Lone Star and Tidwell Washes contribute runoff toward the north boundary of the airport. There is currently a berm along the north section line of the airport boundary which protects the airport from these off-site flows. The berm conveys the off-site flows toward the west and eventually outlets into Dry Lake Wash. On-site runoff around the unimproved perimeter is managed by dirt channels and within the improved areas by culverts and storm drain systems. The ultimate outfall of the on-site runoff is west and south.




Appendix D contains the Drainage Analysis Executive Summary.



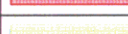




2.6.5 Land Use

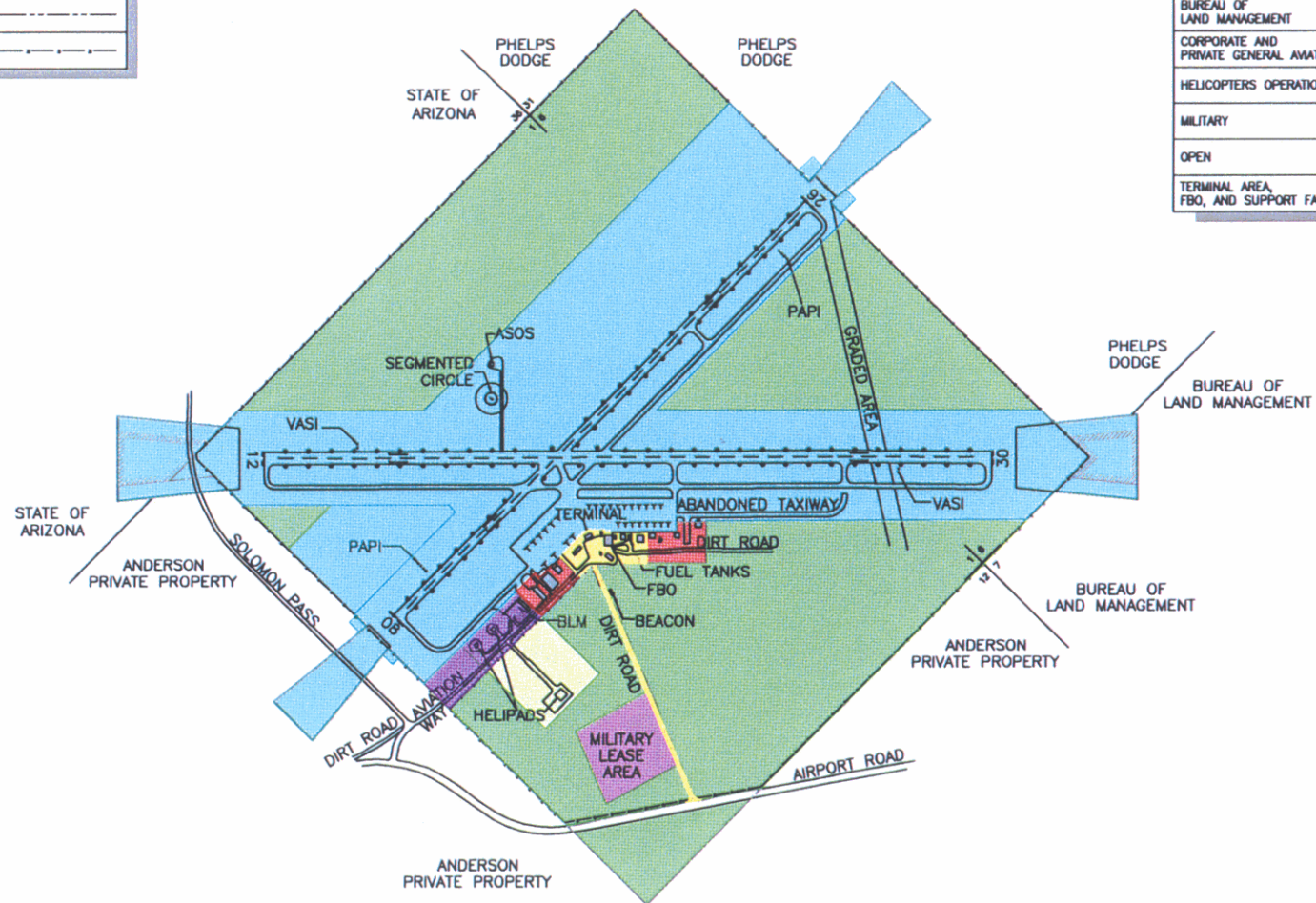
Although the airport is City-owned, the property surrounding the Safford Regional Airport lies in Graham County. The State of Arizona, the Bureau of Land Management (BLM), Phelps Dodge, and a private owner have property adjacent to the airport boundary. **Exhibit 2-4** identifies the location of these landowners along the airport boundary and in relation to existing on-airport land uses. All land immediately adjacent to the airport is zoned agricultural.

The private property owner (west and southwest of the airport boundary) submitted a rezoning application for residential development to include mobile homes. To date, this application has been denied.

Recent land use actions taken that impact the airport include the adoption of an Airport Influence Area (AIA). This AIA was identified and adopted in the spring of 1998. Further details on the AIA are presented in Chapter 7, Land Use Analysis.

LEGEND	
DESCRIPTION	KEY
EXISTING EASEMENT	
PROPERTY LINE	
FENCE	

LAND USE TABLE	
LAND USE	KEY
AIRFIELD OPERATIONS AREA	
BUREAU OF LAND MANAGEMENT	
CORPORATE AND PRIVATE GENERAL AVIATION	
HELICOPTERS OPERATION AREA	
MILITARY	
OPEN	
TERMINAL AREA, FBO, AND SUPPORT FACILITIES	



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EXHIBIT 2-4
Existing Land Use

2.7 SOCIOECONOMIC FACTORS

Safford and the surrounding communities of Pima and Thatcher have seen steady growth in population and employment over the last several years. According to Department of Economic Security statistics, population for the area grew by 21.8% from 12,890 in 1990 to a total of 15,695 in 1997. Employment for the same area grew by 15.9% for the same period.

Additional details on the socioeconomic characteristics of the area are presented in the next chapter, Aviation Demand Forecasts.

2.8 SUMMARY OF INVENTORY

Table 2-2 summarizes the key inventory items for the Safford Regional Airport.

Table 2-2**Inventory Summary**

Regional Transportation	
Highways	AZ State Routes 70 & 191
Railroads	Freight - AZ Eastern Railway Company (Solomon, SE of Safford); Passenger - AMTRAK (Lordsburg, NM or Benson, AZ)
Air	Safford Regional Airport - no scheduled passenger service; air taxi service supports passenger and cargo; UPS also serves cargo demand. Other area airports (GA) - Flying J Ranch and Greenlee County.
Airport Facilities	
Airport (General)	Constructed 1941; Currently 630 Acres; 3,176' elevation
Airside Facilities	
Runways	Runway 12-30 - 6,000x100; standard left traffic pattern; asphalt pavement (good cond.), 33,000 lbs SWG strength Runway 8-26 - 4,800x75; standard left traffic pattern; asphalt pavement (good cond.), 23,000 lbs SWG strength
Taxiways	Parallel taxiways for both runways Exit/connecting taxiways to aprons(35' wide)
Apron Area	48,800 s.y. (34 tiedowns, taxilanes, circulation)
Helicopter Operations Area	One public-use helipad Two private (BLM) helipads
Nav aids, Visual Aids, Markings	Radio-controlled, variable intensity lighting on both runways; PAPIs on Runway 8-26; VASI's on Runway 12-30; Markings - basic, good condition; GPS approaches for Runway 12-30
Airport Landside Facilities	
Terminal	1,100 s.f.; FBO / pilot lounge/waiting room; good condition
Hangars	7 conventional; 5 t-hangars
Surface Access & Parking	One primary paved access road; terminal area parking w/30 public spaces; 4 employee spaces; 2 handicapped

Table 2-2 (Continued)
Inventory Summary

Aviation Support Facilities	
Fueling	100LL – 10,000 gal, Jet A – 12,000 gal; tanks in excellent condition (constructed in 1998)
ARFF and Security	Provided by City of Safford
Utilities	City Electric & Water (5-inch, 6-000-foot line), Telephone- US West; LP Gas – 500-gal tank; Sewage – on-site septic tanks
Other Facilities	BLM Facilities – firefighting, office space, storage Emergency Generator, 50KW (for runway lights, taxiways, ASOS, and radios) ASOS – constructed in 1997, excellent condition House- FBO Office, Storage House- Living Quarters